UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,368	01/31/2002	Stephen James Todd	GB920010046US1	2907

7590	07/12/2005

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EXAMINER
LAROSE, COLIN M

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 February 2005</u>.

2a)☒ This action is **FINAL**.　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>25-39</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>25,27-32 and 34-39</u> is/are rejected.

7)☒ Claim(s) <u>26 and 33</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Arguments and Amendments

1.   Applicant's amendments and arguments filed 4 February 2005, have been entered and

made of record.

Response to Amendments and Arguments

2.   Applicant's newly introduced claims 25-39 are sufficient to overcome the previous

rejection of claims 1-24. However, Applicant's arguments with respect to the Wang reference are

now moot in view of a new ground of rejection set forth below.

Specification

3.   The disclosure is objected to because of the following informalities: The Specification

improperly refers to cancelled claims in paragraphs 6-9.

        Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5.   Claims 29 and 36 recite the limitation "the adjacent pixel". There is insufficient

antecedent basis for this limitation in the claim. It appears the claims should depend from claims

26 and 33, which provide for an adjacent pixel. For examination purposes, claims 29 and 36 are

presumed to depend from claims 26 and 33, respectively. Correction is required.

6.   Claims 31 and 38 recite the limitation "the merging". There is insufficient antecedent

basis for this limitation in the claim. It appears the claims should depend from claims 26 and 33,

which provide a merging step. For examination purposes, claims 31 and 38 are presumed to

depend from claims 26 and 33, respectively. Correction is required.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 25, 27, 28, 30, 32, 34, 35, 37, and 39 are rejected under 35 U.S.C. 102(b) as being

anticipated by U.S. Patent 5,841,903 by Kikuchi.

Regarding claims 25, 32, and 39, Kikuchi discloses a computer-implemented

method/system/program for processing a plurality of pixels representing at least a portion of an

image, comprising the steps of:

scanning a pixel in the plurality of pixels to determine if the pixel contains image

information of significance (figure 5A: the pixels in the image are scanned from left to right and

from top to bottom to determine whether each pixel is black (i.e. significant));

in response to the pixel containing image information of significance, determining if only

an immediately previously scanned single pixel (single pixel) contains image information of

significance (figure 5A: a scanned significant pixel, such as the black pixel located at (2,2) or the

black pixel located at (3,2), is assigned a label based on the status of only the immediately previously scanned (i.e. leftward) pixel);

in response to the single pixel containing image information of significance, assigning the pixel to an existing image segment of the single pixel (i.e. for the black pixel at (3,2), the leftward pixel at (2,2) is black (i.e. significant), so pixel (3,2) is assigned the same label as pixel (2,2));

in response to the single pixel not containing image information of significance, creating a new image segment and assigning the pixel to the new image segment (i.e. for the black pixel at (2,2), the leftward pixel at (1,2) is white (i.e. not significant), so pixel (2,2) is assigned a new label because it represents the beginning of a new segment); and

in response to the assigning or creating steps, updating inertia information for either the new image segment or the existing image segment, respectively (figures 5C and 5D: the new/existing segment consisting of pixels (2,2) and (3,2) is deleted from the memory 1 and rewritten into the connected component memory 3 so as to record the locations of the pixels of a connected segment, or the "inertia information" regarding the connected segment).

Regarding claims 27 and 34, Kikuchi discloses the inertia information is linear and comprises a number of pixels in the new, existing, or image segments (i.e. the connected component memory 3 in figure 5 corresponds to the claimed inertia information in that the connected component memory 3 records the number of pixels contained in the linearly connected segments).

Regarding claims 28 and 35, Kikuchi discloses the plurality of pixels represent a single horizontal line of pixels (i.e. Kikuchi discloses processing the image line-by-line in the horizontal direction).

Regarding claims 30 and 37, Kikuchi discloses storing in a register the updated inertia information immediately after the updating step is performed (i.e. Kikuchi stores the inertia information in a connected component memory 3, as shown in figure 5, after deleting a connected segment from memory 1).

Allowable Subject Matter

9.   Claims 26 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 26 and 33, Kikuchi discloses examining adjacent pixels to determine whether any adjacent pixels contain information of significance. As shown in figure 5E, Kikuchi teaches examining the adjacent pixels on lines above and below the extracted segment [(2,2) – (3,2)] to determine whether any of the adjacent pixels are significant. If any of the adjacent pixels are significant, then they are considered to be a part of the extracted segment and are merged with the extracted segment, as shown in figure 5F.

However, claims 26 and 33 recite, "determining if only a single previously scanned pixel adjacent to the pixel ... contains image information of significance." This is in contrast to the teachings of Kikuchi, wherein all of the adjacent pixels are examined, rather than only a single adjacent pixel. Kikuchi does not teach "determining if only a single previously scanned pixel

adjacent to the pixel ... contains image information of significance," since Kikuchi examines all

of the adjacent pixels. For this reason claims 26 and 33 would be allowable if rewritten in

independent form.

10.   Claims 29 and 31 are objected to as being dependent upon a rejected base claim, but

would be allowable if (1) claim 26 is rewritten in independent form, and (2) claims 29 and 31 are

rewritten to each depend from claim 26 in order to overcome the above rejections under 35 USC

§ 112.

11.   Claims 36 and 38 are objected to as being dependent upon a rejected base claim, but

would be allowable if (1) claim 33 is rewritten in independent form, and (2) claims 36 and 38 are

rewritten to each depend from claim 33 in order to overcome the above rejections under 35 USC

§ 112.

Conclusion

12.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. (After July 15, 2005, the fax number will be changed to **(571)-273-8300**.) Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML
Group Art Unit 2623
28 June 2005

VIKKRAM BALI
PRIMARY EXAMINER